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REMARKS

Applicant graciously appreciates the Office's attention to the instant application. In view of the following remarks, Applicant respectfully requests reconsideration and allowance of the subject application. This amendment is 5 believed to be fully responsive to all issues raised in the June 8, 2005 Office Action.

In the Claims

Applicant currently amends claims 1, 6, 9, 15 and 17 and cancels claims 10 5 and 11. The amendment to claim 9 clarifies that "1.6 of the diameters" is 1.6 times the diameter. Claims 1-4, 6-10 and 12-21 are pending.

Claim Objections: Claims 15, 17 19 and 20

The Office objected to the form of claim 19. Applicant submits that claim 15 19 is in proper form. For example, in the computer arts, an acceptable claim form for a computer-readable medium may reference a method of an independent claim. Claim 19 uses a similar form.

The Office objected to claim 20 as reciting "the" z-plane. Applicant clarifies below and refers the Office to the definition of z-plane given in the 20 instant application at page 8, lines 14 and 15 as well as Figs. 3 and 4. This definition comports with that used in the art of compressor wheels. Applicant

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submits that the definite article is appropriate for claim 20, as the recited compressor wheel of claim 20 has a unique z-plane.

The Office objected to claim 15 being a substantial duplicate of claim 3 and claim 17 being a substantial duplicate of claim 13. Applicant appreciates 5 the Office's attention to these claims. Applicant will take appropriate action, if necessary, upon allowance of any of these claims.

Claim Rejections 35 USC §112, ¶2

The Office rejected claim 9 as being indefinite. Applicant currently 10 amends claim 9 to clarify the language of claim 9. Claim 9 now recites "1.6 times the diameter".

Claim Rejections 35 USC §102(e)

The Office rejected claims 1, 2, 4, 5, 7, 8-10, 12-14, 17 and 18 under 35 15 USC §102(e) as being anticipated by US Patent Application Pub. No. 2005/0036893, referred to herein as the Decker reference. Anticipation under §102 requires that each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference, see MPEP §2131.

20 Applicant currently amends independent claim 1 to essentially represent dependent claim 5 as an independent claim. Applicant further clarifies that the z-plane is coincides substantially with a lowermost point of a trailing edge of a

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blade of the compressor wheel (see, e.g., Figs. 3 and 4 of the instant application) and that the elliptical shape refers to the axial cross-section of the end surface. Regarding the latter clarification, Fig. 6 of the instant application shows a cross-section of the end surface where the end surface comprises an elliptical shape (i.e., eccentricity greater than 0).

5 Applicant submits that claim 1, as currently amended, is patentable over the Decker reference. Claims 2, 4, 7, 8-10, 12, 13 and 14 depend on claim 1 and are believed patentable for at least the same reason.

Independent claim 17 is currently amended to recite that the end surface 10 is shaped to reduce stress. Applicant further clarifies that the z-plane is coincides substantially with a lowermost point of a trailing edge of a blade of the compressor wheel. Applicant submits that the Decker reference does not disclose the subject matter of independent claim 17. In particular, the Decker reference does not disclose the claimed "end surface positioned between the z-plane and the upper, distal end" or the claimed "compressor shaft positioned in 15 the joint and having a distal end that does not extend beyond the z-plane".

Applicant submits that claim 17, as currently amended, is patentable over the Decker reference. Claim 18 depends on claim 17 and is believed patentable for at least the same reason.

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Claim Rejections 35 USC §102(b)

The Office rejected claim 19 under 35 USC §102(b) as being anticipated by US Patent No. 6,032,466 to Woollenweber et al., referred to herein as the Woollenweber reference. Anticipation under §102 requires that each and every 5 element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference, see MPEP §2131. Applicant submits that the Woollenweber reference does not disclose the claimed "compressor shaft positioned in the joint and having a distal end that does not extend beyond the z-plane". For at least this reason, Applicant submits that claim 19 is 10 patentable over the Woollenweber reference.

Claim Rejections 35 USC §103(a): Claims 6 and 11

The Office rejected claims 6 and 11 under 35 USC §103(a) as being unpatentable over the Decker reference. Obviousness under §103 requires (i) 15 some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings; (ii) a reasonable expectation of success; and (iii) that the prior art reference (or references when combined) must teach or suggest all the claim limitations, see MPEP §2143.

20 Applicant cancels claim 11 and currently amends claim 6 and claim 1 from which claim 6 now depends. Applicant submits that claim 6, as being dependent on claim 1, is patentable over the Decker reference.

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The Office states: "One having ordinary skill in the art, furthermore, would have expected Decker's joint end and Applicants' invention to perform equally well with either the geometry shown by Decker or the claimed ratios because each geometry would perform the same function of minimizing stress 5 concentrations at the end of the joint" (OA of June 8, 2005 at page 7). Applicant respectfully disagrees. The Decker reference is not concerned with shapes or shaping to reduce stress. In contrast, the plot of stress versus joint depth of Fig. 7 of the instant application demonstrates how an exemplary end shape reduces stress.

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Claim Rejections 35 USC §103(a): Claims 3, 15-16 and 20-21

The Office rejected claims 3, 15-16 and 20-21 under 35 USC §103(a) as being unpatentable over the Decker reference in view of Applicants' admitted prior art. Applicant traverses the rejection for claim 3 and 20 and 21 for at least 15 the foregoing reasons (see above). In particular, the Decker reference does not disclose or teach a compressor wheel joint that extends to or beyond the z-plane. With respect to claims 20 and 21, Applicant relies on the definition for the z-plane given in the instant specification.

Applicant currently amends independent claim 15 to recite "wherein, in 20 axial cross-section, the end surface comprises an elliptical shape or a full radius". Applicant submits that claim 15, as currently amended, is patentable over the Decker reference and Applicant refers the Office to the discussion of

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claim 1, above. Claim 16 depends on claim 15 and is believed patentable for at least the same reasons.

Conclusion

5 Pending claims 1-4 and 6-10 and 12-21 are believed to be in condition for allowance. Applicant respectfully requests reconsideration and prompt issuance of the present application. Should any issue remain that prevents immediate issuance of the application, the Examiner is encouraged to contact the undersigned attorney to discuss the unresolved issue.

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Dated: 9/8-05

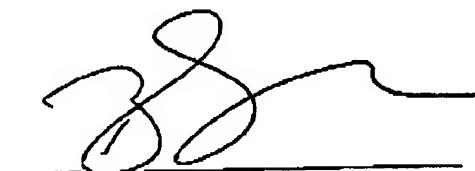
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Respectfully Submitted,

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